Fiber To The Distribution Point (FTTdp)

BBF/SIEPON Joint Workshop

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Some Definitions

- DP – Distribution Point
  - The location in the access network where copper drops are distributed to customer premises
- FTTdp – Fiber To The Distribution Point
  - An access architecture where a fiber backhaul technology feeds a DP which has copper drops of less than 200m
- DPU – Distribution Point Unit
  - A node located at the distribution point that provides DSL interfaces onto the copper drops
- PMA – Persistent Management Agent
  - A management function that supports management of the DPU when the DPU is not accessible
- RPF – Reverse Power Feed
  - Power supplied from customer premises over the copper drop to the DPU
- HON – High Order Node
  - The network node just upstream from the DPU.

Objectives

- Provide broadband service at near FTTH rates while reusing the existing copper drop infrastructure
  - Avoid the problems associated with running fiber into the home
- Provide zero touch service provisioning once the initial DPU installation is complete
  - Customer installed CPE
- Provide the ability to power the DPU from the customer premise over the copper drop

Characteristics

- Only high speed copper drop technologies (currently VDSL2 and G.fast) are supported
- One to N copper drops per DPU
- DPUs are fed by fiber using various technologies including ITU-T PON, IEEE PON, and P2P Ethernet (also bonded VDSL2)
- The DPU is located close enough to the home to provide near FTTH bandwidth over the copper drop and to use reverse powering
- The DPU may be deployed in environmentally unfriendly environments
- The DPU is a simple, low power unit with a minimum of heat dissipation and power consumption
- One subscriber must be able to power the DPU uplink + their copper drop technology
- A PMA exists in a powered location to allow for management of the DPU when it does not have power

Architecture